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BUREAU OF PLANT INDUSTRY

# WEEKLY STATION REPORTS

## OF THE DIVISION OF

## DRY LAND AGRICULTURE

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

SEP 5 1936

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# REPORT FOR THE WEEK ENDING SEPTEMBER 5, 1936.

## HAVRE:

Considerable cloudiness, with a few scattered showers, characterized the weather of the week. Precipitation from January 1 to date now totals 5.48 inches, or approximately 54 percent of normal. In most places soil moisture is still insufficient for uniform germination of winter wheat and winter rye.

Corn fodder has been harvested, and fall plowing was begun under conditions too dry for an ideal job, many plats turning up in a very cloddy condition. With cooler temperatures and light rainfall there is some revival of crested wheatgrass, which has been dormant since early in June. It appears doubtful if much improvement of the range can be expected before winter. A few local farmers are putting up Russian-thistle hay, although in general the total volume of winter feed from this source will be relatively small. Construction of stock reservoirs in various parts of the county by relief agencies is anticipated within the near future.

Station visitors included R. W. Smith of Dickinson.

Maximum temperature, 94°; minimum, 50°; precipitation, 0.01 inch.

## JUDITH BASIN:

The past week has been a continuation of the cool, showery weather that has prevailed for the greater part of August. Rains during the month have totalled 2.26 inches of precipitation, and this moisture has penetrated about 12 inches in fallow land. The normal precipitation for August is 1.54 inches. Seeding winter wheat on the tillage, rotation, and Cereal plots has been completed. Many farmers in the Judith Basin are taking advantage of the moist soil and doing their fall seeding. Seedings of crested wheatgrass were made on the forage and reseeding abandoned land projects. A precipitation of 0.29 inch on August 3 started the growth of all pasture grasses. Crested wheatgrass has made a remarkable growth since that date.

Maximum temperature, 90°; minimum, 48°; precipitation, 0.21 inch.

## HUNTLEY:

Mean temperatures for the last week were somewhat higher than those of a week ago, and the phenomena of thunder storms over the station but with rain falling on surrounding territory have continued. Nearby communities have again received precipitation amounting to nearly an inch for the week, while the station has received practically no moisture.

All fall plowing and the preparation of seedbeds for winter grains were completed during the week, and winter wheat and rye were sown in the rotation and pasture experiments. Despite the very dry soil the plowed plots were less cloddy this fall than for some years past, and except for the lack of moisture fair seedbeds were prepared for most of the winter grain plantings.

Other field work consisted of manuring plots, repairing fences and weighing hogs on the pasture experiments. As most of the palatable forage had been grazed, the hogs were removed to the dry-lot for finishing and the experiment was closed.

Maximum temperature, 99°; minimum, 43°; precipitation, 0.06 inch.

SHERIDAN:

The weather for the week continued fairly warm, but the nights are beginning to get somewhat cooler. One field has been duckfooted this past week, and outside of a few plots to be worked everything is in readiness for the fall seedings. One of the best rains for sometime fell on Friday, when we received 0.30 inch. Other work during the week consisted of hauling gravel, removing fence, and hauling coal.

Maximum temperature, 97°; minimum, 54°; precipitation, 0.33 inch.

MANDAN:

Agronomy - Thistles were mowed during the week on rotation plots to be fall plowed. Thistle growth on plots fallowed in 1935 was quite heavy, whereas on ground in grain in 1935, the growth was not so good. Apparently the failure of crops was not entirely due to low moisture, but partly to extreme heat during the month of July.

Cooperative Grazing Experiment - The grazing experiment was closed for the 1936 season with the last weighing of the steers at the end of August. The steers showed very low average gains for the month of August, a considerable number showing losses. Except in the sweetclover pasture, the greater part of the grazing this season has been on dead 1935 growth of grass and weeds.

The week has continued dry and somewhat warmer. High winds were recorded part of the time.

Maximum temperature, 92°; minimum, 47°; precipitation, 0.01 inch.

Arboriculture - All conifer species in the main windbreak have been irrigated during the week. A small block of land has been irrigated and planted to American elm seed. This species planted earlier in the season burned off as rapidly as it appeared above the ground. A laboratory germination test just before planting gave excellent germination, but it is not known whether field planting will be satisfactory this late in the season. Hackberry seed has been collected from trees in the testing block and from the small group of trees south of Mandan, which are the only known native trees west of the Missouri River in North Dakota. Ponderosa pine is the only conifer species in seed beds which has survived the severe summer conditions. All conifer transplants that have been in the field from 1 to 3 years are a total loss. Very little seed of deciduous species germinated this year, and it now appears as though no seedlings will be available for shipment next spring.

Horticulture - Plums and crabapples are being picked as they ripen, but the trees are suffering from drought and the quality of the fruit is not up to standard. Hardy grapes yielded a fair crop, the yield from vines covered in the winter being much higher than from uncovered vines. These hardy varieties of grapes are showing surprising drought resistance.

Visitors for the week included E. J. Eide, Plant Pathology Dept. of the Minnesota State Experiment Sta.; and Paul Bliss, of the WPA, accompanied by E. A. Plum of the Washington Feature Service, Wash.,D.C.

BELLE FOURCHE:

The weather during the week was unseasonably warm, and no precipitation of consequence was received. Temperatures at night have been nearly as high as in midsummer, and the minimum, 68°, on Sept. 2 was the highest daily minimum temperature ever recorded in September at this station. Corn on fallow and sorgo matured or dried rapidly and were harvested. Owing to thin stands and uneven growth, sorgo was cut

by hand. Grasshoppers and rabbits have damaged potatoes to such an extent that only about 30 percent of the vines remain.

A total of 1.53 inches precipitation was received in August, which is 0.09 inch above average, but none of the rains was heavy enough to be of value to crops. The mean temperature for the month, 73°, equalled the third highest of record for August, and was 3° above normal.

Visitors included G. H. Coons and S. B. Nuckols, Division of Sugar Plant Investigations.

Maximum temperature, 94°; minimum, 53°; precipitation, 0.06 inch.

ARCHER:

The weather during the week was typical of fall, cool at night and warm during the day. At times it was threatening with considerable wind.

Crops in the field are maturing rapidly. Corn, beans, and potatoes are approaching maturity. Late maturing corn is in the silage stage. The harvesting of corn and beans is in progress. Only the most favored spots of native grass are green. All stubble land has a mat of Russian thistles.

Work at the station consisted of threshing grain and one-waying dairy field No. 6 and some of the larger areas in the experimental field to kill weeds. Winter wheat was seeded in the rotation plots and winter rye in dairy field No. 5. Millet is being cut in dairy field No. 4, and the corn on the rotation plots will be practically all cut today.

F. D. Richey and E. C. Auchter, Bureau of Plant Industry, and A. C. Hildreth, Cheyenne Horticultural Field Station, were station visitors September 1. W. L. Quayle visited the station Sept. 3.

Maximum temperature, 87°; minimum, 48°; precipitation, trace.

AKRON:

Corn harvesting was started Monday. Rotation plots on small grain stubble preparation will not generally produce any grain. Plots of corn after corn promise yields of possibly 8 to 10 bushels per acre. Millet harvesting was completed, except the later dates of the date of seeding experiment. Tepary was harvested from the bean variety experiment. The other varieties are ripening rapidly.

Black walnuts in the forestry experiment have produced a crop of nuts again this year. This planting, made about 1914, started bearing about 4 years ago. August passed with 97 percent normal precipitation.

Maximum temperature, 94°; minimum, 47°; precipitation, 0.06 inch.

COLBY:

This has been a cool, rainy week. Scattered showers fell over this part of the State, but the precipitation was light in this vicinity. The temperatures were the lowest in nearly four months. The moisture did not soak down deep enough to be of much permanent benefit to the sorghum crops, the only crops still green. Some seeding of wheat is being done by farmers. Most farmers are hesitant about seeding, as the numerous grasshoppers are destroying most of the seeded wheat as it comes up. Feterita is beginning to head on the plots. The other sorghums are not beginning to head yet.

Maximum temperature, 98°; minimum, 52°; precipitation, 0.45 inch. Precipitation for August, 1.56 inches; Precipitation, January - August, 7.53 inches; 49-year average, 13.79 inches. August, with a mean temperature of 79.6°, was the hottest August on record. The temperature was 100° or above on 16 days of the month.

HAYS:

The light rains during August have kept most of the sorghums alive, and each shower has given new hopes for feed crops, but thus far, "hopes" is about as far as the relief goes. Another rain Thursday, wet the soil only 3 or 4 inches deep, and the moisture seems to be disappearing rapidly. None of the rains since May have been large enough to accumulate much water in the soil. Thus far, neither kafir nor milo on the project have produced any heads. Some of it still looks promising but most of it is burned considerable. Wheatland milo is slowly heading. Sorgo drilled for hay is about 12 inches high and is badly burned. Native pasture has greened up slightly, but the growth is too short for grazing.

Maximum temperature, 100°; minimum, 58°; precipitation, 0.95 inch.

GARDEN CITY:

This week has been comparatively cool. Two showers, one of 0.11 inch and the other 0.38 inch, with the 0.75 inch on August 27 has helped the crops some and especially the Sudan grass. Those corn plots not on fallow, and the ones that were not lister planted were bound and shocked. The plots for wheat that had been listed were leveled, and the others either spring-toothed or rod-weeded.

Soil samples were taken on the differently spaced milo plots; the M. C. milo plots A, B; the M. F. milo plots L and M; the diked milo plot; and the evaporation plots.

C. O. Grandfield of Kansas State College and John H. Martin were visitors of the station.

Maximum temperature, 97°; minimum, 55°; precipitation, 0.49 inch.

TUCUMCARI:

A marked drop in temperatures followed rain August 27, and the past week has been comparatively cool. The response of crops to rain and cooler weather has been very erratic, but in most instances it is evident the plants were too severely drought injured to make normal yields, although an effort is being made by many varieties to produce late suckers. It is probable that harvest of nearly all sorghums will be very late, possibly delayed until frost, in hopes late heads will mature. And in all probability very few late heads will mature.

Cowpeas have changed but little in the past month. They were just ready to vine when injured by drought. A few leaves turned and dropped, but most of the plant remained green. After rain of a week ago it was hoped they would resume growth, but to date there has been little if any change in their condition or appearance.

Nearly all corn plots will not make ears worth harvesting, with a few plots producing light grain yields. Considering all station crops as a whole, it is apparent that less than half-normal yields will be obtained. In 1935 the precipitation to September 1 was approximately the same as this year, some 1½ inches below normal. The 1935 yields were in most cases above normal - another instance of the importance of rainfall distribution.

Recent rains have put wheat land on the plains in excellent condition, and farmers are rushing final preparation of land and wheat seeding. This is the fourth or fifth consecutive year when fall conditions for wheat were very promising; in all previous years of this series extremely severe spring conditions have resulted in near-failures. Farmers this fall are plunging on wheat acreage, feeling that eventually climatic conditions must improve.

Maximum temperature, 94°; minimum, 60°; precipitation, 0.15 inch.

DALHART:

There still remains no rain to break the drought. Conditions are quite similar to those previously reported. The month of August gave only 0.25 inch of rain - the lowest August precipitation on record. Sorghums are drying to almost completely dried. Only a few marginal heads show. Most of the rotation plots were burned before the heads even reached the boot. The listed sorghum plots are producing more heads than the surface planted. Fallow plots show heads only in spotted locations.

John H. Martin and F. E. Keating were visitors during the week.

Maximum temperature, 97°; minimum, 58°; precipitation, 0.10 inch.

BIG SPRING: (Report for the two weeks ending September 5, 1936.)

Two light showers totaling 0.33 inch were received during the past two weeks. Although they helped to cool off the atmosphere, they were of little value to the crops. Cotton is probably too far advanced to be helped by rains at this time, but late feed crops would be materially improved. In fact, late feed must have rain in order to make anything. Rains have been very spotted over the county; some sections reported as much as 2 inches, while others have received none.

About 100 bales of cotton have been ginned in this county up to date. Dry weather has caused most of this to open prematurely, and as a result most of the lint sticks to the burr so tightly that a large part of it is being snapped the first time over. This procedure is rather unusual, as snapping does not generally start until the latter part of the season.

Some of the early maturing varieties of cotton were picked during the week, and some early milo was headed. Other work has consisted of cutting corn plots, pulling broomcorn, and harvesting early date of grain sorghums.

Maximum temperature, 105°; minimum, 65°; precipitation, 0.33 inches.

LAWTON: (Report for the two weeks ending September 5, 1936.)

Not even a trace of precipitation was recorded in August. The 9.67 inches from January 1 to August 31 was 45 percent of normal. The average maximum temperature for August was 102.7°. During the 50-day period, July 13 - August 31, the average maximum temperature was 103°. Temperatures have been considerably more moderate since August. During the first week in September showers and rains, highly variable in quantity, were widely scattered over the State. On September 3, a rain of 0.32 inch was recorded at the station. To date the cooler temperatures and scattered rains have alleviated drought conditions but very little.

A few farmers are plowing with disk plows. Preparation of any sort with a mold board plow or a lister is absolutely futile.

The first picking of cotton on the station was made September 1-3. In the variety test the acre yield of seed cotton varied from 45 to 250 pounds. Another light picking some time this fall appears probable. In the rotation plots the acre yield of seed cotton varied from 12 to 140 pounds. Another picking in these plots does not appear probable. In all instances the bolls were small and prematurely opened, and the fiber was very weak.

WOODWARD:

The outstanding event of the week was a rain of 0.96 inch, coming slowly so that it all entered the soil. This should put considerable growth on the sorghums, and it will germinate volunteer wheat so land can be prepared for seeding. It came too late to make much sorghum grain possible.

With the cooler weather, many flowering plants have put on a burst of bloom. The verbenas and spiderworts are especially rich in display.

Maximum temperature, 101°; minimum, 62°.

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SEP 12 1936

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REPORT FOR THE WEEK ENDING SEPTEMBER 12, 1936.

JUDITH BASIN:

The weather for the past week has been ideal for fall seeding, and the bulk of the winter wheat in the Judith Basin has been seeded. Work on the station has included the following: Seeding a large winter wheat nursery on the cereal project, harvesting two general fields of corn, seeding crested wheatgrass for the new grass rotations; and seeding plots in the rate and date of seeding test with Yogo winter wheat. All seedings of winter wheat have emerged with good stands.

All weeds have made extensive growth since the rains in August. This has necessitated a great deal of late cultivation of fallow, which in turn may aggravate soil blowing. Russian thistles have grown so large on the borders of the rotation plots that they should be mowed to prevent excessive drifting of snow.

Maximum temperature, 79°; minimum, 37°; precipitation, 0.41 inch.

HUNTLEY:

Fair weather with seasonably cooler temperatures has prevailed throughout the week. Two light sprinkles of rain were received but were of no benefit to crops. Plots of Sudan grass and sorgo were harvested, and the yields were much above those anticipated a month ago. The alfalfa seed crop, though late, continues to look promising on the plots pastured by hogs earlier in the season.

Farmers are preparing land for the planting of winter wheat, but as yet very little grain has been sown owing to the extremely dry soil. Light showers have germinated a small amount of the wheat shattered by grasshoppers, but the hoped-for fall pasturage from that source has not yet materialized. Where available, Russian thistles are being gathered for winter feed.

Maximum temperature, 85°; minimum, 40°; precipitation, 0.07 inch.

SHERIDAN:

The weather has cooled off some, and we are having delightful fall days. Only a trace of precipitation has been received during the week, making it necessary to hold up all fall plantings. The orchard on the hill in Field M has been contour furrowed to avoid any soil blowing and hold all the moisture that may come this fall and spring.

Maximum temperature, 88°; minimum, 44°; precipitation, trace.

MANDAN:

Agronomy - Preparation of ground for, and seeding of winter rye and winter wheat in the rotations was finished the middle of the week. Notwithstanding moderate rains early in the week, the ground is still too dry to plow well, moisture having penetrated only about 1½ inches.

Small grains and corn seeded in the rotations this spring, and which failed to germinate at that time, are now germinating and emerging.

Cooperative Grazing Experiment - After shipping the steers on the 9th, pipes between the various watering tanks were disconnected and drained for winter. The prairie vegetation is beginning to show a little green from recent showers. Grama grass especially is showing green.

The weather for the past week has been cool and somewhat unsettled.

Maximum temperature, 85°; minimum, 42°; precipitation, 0.57 inch.

Arboriculture - Seed beds of ponderosa pine, eastern red cedar, and Rocky Mountain red cedar have been planted during the week. Some dead trees have been removed from the main windbreak. American elm seed planted 10 days ago is now emerging, and also Chinese elm seed which was planted last June.

Horticulture - Late varieties of plums and crabapples are now being picked. Fruits are small and of poor quality. Some of the crabs are worthless except for seed. Plums are being used mainly for seed.

Walter A. Davidson of the Division of Seed Investigations visited the station September 10.

ARCHER:

The weather during the week was moderate with threatening storm conditions. The winter wheat and winter rye are in need of rain. Trees are beginning to lose their leaves, and practically all vegetation is showing signs of fall. Work at the station consisted of cutting the corn in the experimental field, harvesting the beans, cutting the Sudan grass in the dairy field, and the hauling of millet hay.

A. D. Stoesz and George A. Rogler of the Soil Conservation Service were station visitors September 12.

Maximum temperature, 86°; minimum, 43°; precipitation, 0.05 inch.

NORTH PLATTE:

Weather has continued dry and warm. With the coming of shorter days, the intense heat of the previous months has abated, humidity is somewhat higher, and evaporation lower. However, the drought condition persists. Trees continue to lose leaves, pastures remain dry, and conditions for fall seeding small grains are decidedly unfavorable.

Corn was harvested from all rotation plats during the week. Corn land was disked for winter wheat, and late plowing for winter wheat was completed. Under normal conditions, next week would be the optimum time for winter wheat seeding. With the soil in most cases too dry for germination, it is possible that delayed seeding would not be a disadvantage.

Maximum temperature, 92°; minimum, 52°; precipitation, 0.16 inch.

AKRON:

Corn harvesting was completed, and a start was made on the sorghum variety experiment. The later plots, seeded on Sudan grass stubble, have in most cases suspended growth without having headed. Bean harvesting has also been in progress. The weighing of nursery grain has occupied the time of one man the most of the week.

Plans are being formulated for seeding the bulk of the station winter wheat next week. Surface soil appears to be too dry to support germination except possibly on fallow preparation, but this will be the tag-end of the demonstrated best seeding season at this station. Poison bran was scattered during the week for the still too numerous grasshoppers.

Maximum temperature, 92°; minimum, 47°; precipitation, trace.

COLBY:

The weather has been considerably hotter again this week. On Thursday the temperature rose to 102°, which is the hottest on record for September at this station. Rain has threatened several times, but none has fallen. At times it has been fairly windy. Grasshoppers are still numerous. Wheat seeding has been in progress for about three weeks, but has not become general. Many who have seeded a part of their acreage have stopped and are waiting for a rain. The wheat that is up does not look promising. Much of it has been eaten off by grasshoppers, and the rest appears to be at a standstill. The sorghums are gradually drying up. They are headed some around the edges.

Maximum temperature, 102°; minimum, 55°; precipitation, none.

HAYS:

The weather has been varied, sunshine, cloudiness, and some rain but still not enough rain to give the feed crops a big push such as they need if satisfactory yields are to be produced. These crops apparently were so injured by drought and heat as to make recovery slow if not impossible.

Pink and Blackhull kafirs are showing only occasional heads along the margin of the plots. Dwarf Yellow milo is showing a few more heads than kafir but not enough to assure a yield of grain. Late seeded milo is heading better than that seeded at the normal date. It is doubtful if any of it can mature before frost. Wheatland milo has been trying to head for two weeks. Perhaps 15% of it is headed, but many of the earlier heads have failed to set grain and many of the later ones are only in the bloom stage.

During the week considerable tillage work has been done on plots to be seeded to wheat and rye, more poison-bran mash spread to reduce the grasshopper population before wheat seeding time, some soil samples were taken and some improvement work was done about the buildings.

Maximum temperature, 101°; minimum, 59°; precipitation, 1.01 inches.

GARDEN CITY:

Only a trace of rain was recorded this week, although there was several days of cloudy weather. The feterita has headed out and is maturing fairly well. Some of the milo on fallow and on the wide spaced plots is also maturing, but that which is continuously cropped or which is in other rotations has only headed out in the borders.

Field work consisted of rod-weeding a few plots that go into wheat, and hoeing weeds on the project. A ditch was made around one series to facilitate better drainage. Soil samples were taken on the M. C. wheat plots, A, B, C, and D, and on the evaporation plots.

E. F. Chilcott and L. E. Call were visitors at the station.

Maximum temperature, 97°; minimum, 61°; precipitation, trace.

TUCUMCARI:

Temperatures are remaining high for this time of year, but only the late planted sorghums are responding to showers and favorable temperatures. Cooperative and rotation sorghums planted June 1 - 25 were too severely drought injured to make appreciable recovery. Grain sorghums and forage sorghums planted July 6 are making rapid headway, but yields may be reduced by frost, for most varieties are barely in full head.

Recent showers have improved native sod, with much grama grass now making seed. Moisture conditions over the Plains section of the

county are favorable for wheat seeding, and a heavy acreage is being seeded. Station wheat and rye plots were seeded this week.

There will be considerable bundle feed in this locality, but very little sorghum grain. Birds have been more numerous on the station than within memory, stripping some plots. Grain is so scarce that bird concentration is extremely high in those rare fields where sorghums have reached the milk stage. Lark buntings were more numerous than sparrows up to 10 days ago, but more recently the former have left, with sparrows apparently increasing in numbers.

Bids for the construction of the Conchas dam at the junction of the Conchas and Canadian Rivers some 30 miles northwest of Tucumcari were opened this week, with seven firms bidding. The low bidder was some $11,000 below the Army engineers estimate, so it is expected bid will be awarded. Bid total was approximately four and three-quarter million dollars. Work is to start within 20 days of notification of award, with contracting firm allowed 900 working days for completion.

Maximum temperature, 94°; minimum, 60°; precipitation, 0.32 inch.

DALHART:

Crops have continued to dry. The milo plots which had dried the most were harvested during the week. All cowpea plots were harvested. Stover and hay yields on these plots are light - just above being classed as failures in each instance. A rain of 0.41 inch the evening of the 11th was the largest rain since July 11. Wheat seeding has not started because of dry soil. It is quite likely that only a small acreage of row-sorghums will be harvested for feed as growth is very short except in a few localities.

Visitors during the week included L. E. Call and E. F. Chilcott.

Maximum temperature, 95°; minimum, 59°; precipitation, 0.55 inch.

BIG SPRING:

Weather conditions during the past seven days have been merely a continuation of those prevailing for the past several weeks. A light shower totaling 0.15 inch was received September 7, but this barely settled the dust for the day, otherwise it is the same old story, hot and dry. Cotton picking is getting well under way, as cotton has been opening rapidly during the past week. Grain sorghums that have managed to head are ripening prematurely, but the forage sorghums have failed to head as yet. The cotton in varietal and spacing tests was picked over for the first time during the week. It is estimated that half the crop is being picked the first time over. Other work has consisted of harvesting sorghum varieties and repairing the cattle shed.

John H. Martin was a station visitor during the week.

Maximum temperature, 98°; minimum, 62°; precipitation, 0.15 inch.

WOODWARD:

The sky has been partly cloudy over the past week, the wind low, and the day time temperatures for the most part in the 90's with a minimum in the 70's. It has, in other words, been good growing weather. Milo especially has responded to this. Some of it at a standstill all summer is heading normally, although the only rain of consequence since June 3 was the 0.96 inch which fell September 3. It is raining as this is written, about 0.65 inch having fallen. With this added rainfall sorghums will make considerable feed and some grain.

Many farmers planted wheat following the rain of September 3, and the warm weather and the present rain will assure rapid growth of this, although there is little stored moisture for it to keep growing on.

Shrub cupress (Gilia rubra) with its slender form, finely cut dense foliage, and spikes of scarlet blossoms is the "Prettiest thing in Oklahoma". Mirabilis multiflora is closely related to four o'clock, but a single plant will grow to a diameter of 10 feet, and it has hundreds of blossoms over the summer. It is a native plant worthy of cultivation. The crapemyrtle is at its best since the cooler weather, vitex and desert willow and trumpet creeper all are giving a final display.

Work operations during the past week consisted largely of drilling wheat in vineyard, orchard, and windbreaks to prevent soil blowing, and planting grass on Forage project.

L. E. Call and John Martin were station visitors during the week.

Maximum temperature, 99°; minimum, 66°; precipitation, 0.64 inch.

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SEP 19 1936

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# REPORT FOR THE WEEK ENDING SEPTEMBER 19, 1936.

HAVRE: (Report for the two weeks ending September 19, 1936.)

Precipitation during the past two weeks has been very light, totaling only 0.25 inch, insufficient for improving soil moisture. Somewhat cooler temperatures prevailed. The first frost of the season occurred on September 13, and snow appeared on nearby foothills.

Fall plowing in the experimental field has been completed. Winter wheat and winter rye are now being sown. The first date of planting crested wheatgrass in weedy stubble was made on the 15th. A small amount of third cutting alfalfa has been harvested from certain sub-irrigated farm fields, and some additional Russian-thistle hay has been put up. The Ladak alfalfa seed crop from a 9-acre tract yielded approximately 500 pounds of good quality registered stock. Station roads and driveways were graded, and other miscellaneous physical plant work was accomplished.

Cattle have been moved to the fall pasture area on the lease. The cows maintained good condition while on summer range, whereas calves and especially yearling steers made excellent gains. The grazing period this season will extend approximately to November 1 in the mountain area.

Visitors included G. Allen Mail, of the Entomology Department at Bozeman, who investigated a large hatch of the Says Plant Bug in this vicinity. Carl Englehorn of the Soil Erosion Service, Great Falls, and representatives of the Forest Service at Missoula also inspected various station projects.

Maximum temperature, 87°; minimum, 29°; precipitation, 0.25 inch.

JUDITH BASIN:

The first killing frost was recorded September 15 and was followed by two other days of frost. The latter part of the week has been ideal fall weather. Grass pastures still continue to furnish good grazing. Repairs to the physical plant has occupied our time this week. Excavation of the basement under the mess house, to make possible the installation of a furnace, is in progress.

Maximum temperature, 77°; minimum, 27°; precipitation, 0.04 inch.

HUNTLEY:

Showers occurred early in the week and were followed by the first frosts of the season. A drop to 26° was sufficient to kill such garden stuff as melons, tomatoes, and corn and the more tender ornamentals. Field beans, potatoes, and corn not yet harvested were also killed. Alfalfa showed no injury. The precipitation did not penetrate to the depth of seeding fall grains, and as yet nothing has come up on the plots. Planting of winter wheat on the neighboring dry farms is getting under way, but to date no large acreage has been seeded because of the dry seed beds.

Maximum temperature, 78°; minimum, 26°; precipitation, 0.40 inch.

SHERIDAN:

Decidedly cooler weather than at any time since the first of June prevailed over the week, with a killing frost on the 15th, and still lower temperatures the two following mornings. Dry weather still continues, with no rain of any consequence so far this month. Some fall grain has been sown in this section, but most ranchers

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Cattle have been moved to the fall pasture area on the lease. The cows maintained good condition while on summer range, whereas calves and especially yearling steers made excellent gains. The grazing period this season will extend approximately to November 1 in the mountain area.

Visitors included G. Allen Mail, of the Entomology Department at Bozeman, who investigated a large hatch of the Says Plant Bug in this vicinity. Carl Englehorn of the Soil Erosion Service, Great Falls, and representatives of the Forest Service at Missoula also inspected various station projects.

Maximum temperature, 87°; minimum, 29°; precipitation, 0.25 inch.

JUDITH BASIN:

The first killing frost was recorded September 15 and was followed by two other days of frost. The latter part of the week has been ideal fall weather. Grass pastures still continue to furnish good grazing. Repairs to the physical plant has occupied our time this week. Excavation of the basement under the mess house, to make possible the installation of a furnace, is in progress.

Maximum temperature, 77°; minimum, 27°; precipitation, 0.04 inch.

HUNTLEY:

Showers occurred early in the week and were followed by the first frosts of the season. A drop to 26° was sufficient to kill such garden stuff as melons, tomatoes, and corn and the more tender ornamentals. Field beans, potatoes, and corn not yet harvested were also killed. Alfalfa showed no injury. The precipitation did not penetrate to the depth of seeding fall grains, and as yet nothing has come up on the plots. Planting of winter wheat on the neighboring dry farms is getting under way, but to date no large acreage has been seeded because of the dry seed beds.

Maximum temperature, 78°; minimum, 26°; precipitation, 0.40 inch.

SHERIDAN:

Decidedly cooler weather than at any time since the first of June prevailed over the week, with a killing frost on the 15th, and still lower temperatures the two following mornings. Dry weather still continues, with no rain of any consequence so far this month. Some fall grain has been sown in this section, but most ranchers

are delaying any seeding in hopes of being able to seed in moist soil later. No seeding has yet been done on the station. Fall plowing of plots was completed. No other fall plowing will be done, unless there is rain sufficient to make plowing practicable. Sorgo, Sudan grass, and corn fodder were weighed and shredded.

Maximum temperature, 93°; minimum, 25°; precipitation, 0.06 inch.

DICKINSON:

Dry weather has continued with high winds and dust blowing on two days. Killing frost was recorded September 16, just two days later than average. No rain has fallen so far this month. Fall plowing is being further delayed, waiting for enough rain to make a good job possible. Winter rye and winter wheat varieties were planted on the cereals project this week. Partial stands of these crops seeded on the rotations a month ago have disappeared as casualties of drought and grasshoppers. A fair amount of green tomatoes was picked from the garden. A few late crabs were harvested. Some livestock is still being shipped out. Very little feed is being shipped in because of the high price.

Maximum temperature, 92°; minimum, 31°; precipitation, 0.03 inch.

MANDAN:

Agronomy - The past week was cool, with temperature near freezing on two or three nights. No frost damage occurred on the station, but garden truck was killed on the lowlands along the river. A heavy rain fell on the evening of the 13th. The rain of 0.81 inch was the heaviest since July 1935. It fell in about half an hour, and much of it ran off. The soil in the fields was wet down to 5 or 6 inches. Fall plowing was completed during the week. The rain wet the soil about the plowing depth.

Winter rye and winter wheat are up to good stands. Crested wheatgrass is showing green in spots. The rain came too late to allow much fall growth on this grass.

The total rainfall for the month to date is 1.38 inches, and for the year to date 5.33 inches.

Maximum temperature, 86°; minimum, 34°; precipitation, none.

Cooperative Grazing Experiment - The grazing experiment was closed at the end of August. All pastures were practically grazed down, so that little feed was left. The cattle were shipped to the Agricultural College on the 9th.

Grasses on the prairie started a little growth after the rains. There is enough growth to indicate the grasses are still alive after being brown all summer.

Arboriculture - Collection of Russian-olive seed has been in progress during the week and is now practically completed. Only a thin crop was present this year, and it was necessary to collect from farm shelter belts in the near vicinity. Juniperus scopulorum seed beds planted this fall have been mulched for the winter. Siberian pea-tree, Chinese elm, American elm, and honey locust seeds planted last spring are now emerging to good stands. The seedlings are in a very tender stage and will probably be badly injured if not entirely killed by frost.

Horticulture - Dead wood is being removed from fruit trees, and dead trees are being pulled out. Plum and P. baccata seeds have been washed out and the plums stratified. All fruit has been picked.

F. D. Richey and E. C. Auchter, Chief and Asst. Chief Bureau of Plant Industry, visited the station September 17. George A. Montgomery, Associate Editor of Capper's Farmer, also visited the station.

ARCHER:

The weather during the week was clear and for the most part cool. During the night of September 15 the temperature dropped from 84° to 33°. In some places the temperature was sufficiently low to kill tender plants. The continued dry weather is a disadvantage to winter cereals, especially those seeded September 1 and later. The emergence of these seedings is rather spotted, but seedings made August 20 have produced good stands. The rotation plot seedings were made September 1.

Work at the station consisted of putting up silage. This work will be finished today.

Dan Hansen and Beyer Aune, Western Irrigation Agriculture, visited the station September 13. W. L. Quayle and Ralph Hyer, Superintendent of the Afton State Farm, visited the station Sept. 14.

Maximum temperature, 88°; minimum, 33°; precipitation, none.

NORTH PLATTE:

Dry weather with warm days and cool nights has continued. Steady, strong winds have contributed to a high evaporation. Winter wheat on the D. L. A. rotations was seeded September 18 - 19. By deep drilling, some of the wheat on fallow may be placed so that partial germination will be possible. On cropped land, stands will not be expected until additional moisture is received.

Maximum temperature, 95°; minimum, 39°; precipitation, 0.01 inch.

AKRON:

Hot, dry weather continued. Local showers on Friday did not reach the station.

Rate and date of seeding proso experiments, and some other plots, were threshed Monday and Tuesday. Winter wheat nursery seeding was continued. Bean harvesting has been cared for as the crop ripened. Winter wheat variety experiment was seeded Friday. Two plots of foundation seed Turghai proso on fallow along the highway averaged 26.6 bushels per acre. Three plots of Yellow Manitoba on spring plowed small grain stubble land on the rate and spacing corn project series averaged 9.8 bushels per acre.

No winter wheat is being seeded in this locality on account of the dry soil. On the station there are no hopes of securing prompt emergence except on fallow, and there it may be spotted because of the inability to reach uniformly wet soil. Seeding is proceeding in the dry soil, since this is the tag end of the demonstrated good seeding season at this station.

Maximum temperature, 93°; minimum, 37°; precipitation, none.

COLBY:

A rain on the afternoon of the 13th was generally fairly heavy over the eastern half of the county and temporarily put an end to the drought. There was almost no precipitation during the week in the west half of the county, and the drought continues. In Colby 0.67 inch fell, but at the station it measured only 0.36 inch. It has been cool all week, and nearly every morning has been cloudy and misty.

Where it rained it rained hard, covering the wheat which was not up yet or which was still small so deep that reseeding will be necessary. It also smoothed the surface of the soil, so that considerable soil blowing has taken place when the wind blew several days this week.

No seeding was done at the station. The late fall plowing was done this week, and the plots have been staked. Seeding will be delayed until it rains, unless rain holds off too long. The soil is wet about 2 inches deep. On fallow it is again wet below 5 or 6 inches deep. The continuously cropped plots are generally dry, except for the surface 2 inches. The sorghums are still green, but are making very little growth.

Maximum temperature, 96°; minimum, 46°; precipitation, 0.36 inch.

HAYS:

Temperatures have been mild and the sky has been partly clouded during the week, but the moisture previously reported has for the most part disappeared. Sorghums generally on cropped land are at a standstill or are deteriorating. On fallowed ground development is slow, although a few heads are emerging. Sorgo sowed on cropped land for a hay crop is very short, ranging from 4 to 12 inches, many of the plants are dead, and others are drying up. If mowed there would not be enough to gather with a rake.

On the ground listed early for wheat, it has been necessary to throw in the ridges without sufficient rain to start the volunteer wheat. The ground listed with the basin lister was left very rough by the ridgebuster. It was too rough and uneven for good seeding, minature mounds, too big for comfortable operation of machinery marked all the places where the dams had been in the original lister furrows. Although a rough surface is generally desirable, this was too much of a good thing. The ground was double disked this week to further level the surface for drilling. The dams in the furrows are desirable when it rains, if it rains, but they should be knocked out of the way ahead of the guide wheels of the ridgebuster. This can easily be done, but was not done this year.

Maximum temperature, 95°; minimum, 55°; precipitation, trace.

GARDEN CITY:

There has been considerable cloudy weather this week, but no rain. The total rainfall so far this month is 0.49 inch, and unless there is more in the near future wheat seeding will have to be delayed.

The kafir that has headed out is in the plot borders, and it is doubtful whether that will mature. Cowpea plants on the borders of the plots have blossomed and a few pods are forming, but none of the plants in the plots have blossomed as yet.

Field work consisted of cutting and binding the corn on fallow and on the listed plots. The grain yield was negligible. Those plots scheduled to be worked September 15 were one-wayed or plowed. Soil samples were taken on the MF milo plots L and M, on the MC milo plots A and B, on the diked milo plot, on the different width row milo plots, and on the evaporation plots.

Frank Parsons, Kansas Crop Improvement Association, Kansas State College, was a station visitor this week.

Maximum temperature, 94°; minimum, 52°; precipitation, none.

TUCUMCARI:

A marked drop in temperatures the middle of the week was a reminder that autumn is here. The mean temperature for the first half of September was 77°, that of the past four days, 68°.

During the week the wheat and rye plots were fenced; rotation cowpeas were harvested and cocked, as were bean rotation plots; a number of corn plots cut; broomcorn pulled and seeded; and cowpeas picked for seed. A few early grain sorghum variety plots were headed, but most of these plots will be left until all chance of late sucker heads maturing is past.

Wheat and rye plots showed good stands from 6 to 10 days after seeding. Farmers are binding grain and forage sorghums, even though late heads are not yet in the dough stage. Grain production will be so low that in most instances this is being ignored, farmers harvesting with the intent of securing the crop before leaves turn and fall.

Maximum temperature, 90°; minimum, 54°; precipitation, none.

DALHART:

Continued dry weather has caused farmers to harvest for bundle feed what little forage there was available. Several fields remain to harvest, or the sorghum growth may be left for the "benefit" payment. There is only a rare occasional field in which heads have been produced. The only local area where fair to good yields are being produced is in the territory between Hartley and Channing and extending east a short distance. For the last four years when the surrounding territory remained dry this particular local area has had rains of sufficient amount to make nearly normal crops. Most farmers report much lighter forage yields than last year, which is also true for the station.

Maximum temperature, 91°; minimum, 51°; precipitation, trace.

BIG SPRING:

The drought in this section was definitely broken during the past week, when 2.51 inches of rain was received. This was received during the past three days from several intermittent rains all falling slowly. These fell in such a manner that there was no run-off or washing.

A cloudburst hit the area beginning 50 miles south of here, where they received more than 20 inches of rain in less than two days. This put many streams and creeks out of banks, which caused large livestock and property losses.

The rain in this county has changed the feed outlook to a great extent. While it will not help any but the very late planted milo, it will produce a large amount of roughage from Sumac and Hegari, which otherwise would have produced practically nothing. Conditions now are such that small grains can be planted for grazing. Native pastures will also be greatly improved before frost.

Station work has consisted mainly of picking cotton and making some station repairs.

Maximum temperature, 96°; minimum, 57°; precipitation, 2.51 inches.

LAWTON: (Report for the two weeks ending September 19, 1936.)

The 1936 summer drought extending over a period of 101 days terminated in gentle rains that amounted to 3.67 inches September 15-19. This precipitation fell in the form of a drizzle most of the time, and the dry, cracked soil absorbed practically all of it. Supplies of stock water were augmented only temporarily in most places. The cool, cloudy weather that accompanied the recent rains added materially to the relief from the torrid heat of the past summer.

During the week(the week ending September 19) the maximum temperature ranged from 66° to 88° and the minimum from 60° to 72°. The wind velocity was extremely low.

Farmers feel assured of another opportunity to gamble on fall pasturage and another small grain crop. A very few farmers had sown some oats and some barley previous to the rainfall, and the present moisture assures an early emergence.

The station served as host to the 4-H Clubs and the Farm Womens' Federated Clubs of the county for a 3-day fair September 16-18. An excellent display of canned products, domestic art, and some livestock was exhibited. A drizzling rain that fell most of the time cut the attendance sharply but failed to reduce the ardor and enthusiasm of those principally interested in that sort of activity.

WOODWARD:

Partial to heavy cloudiness has existed throughout the week, with very much lower temperatures. Though there has been a trace of rain on many days, the total precipitation since Saturday morning a week ago has been only 0.88 inch. That for the month has been 2.34 inches. Soil is in most excellent condition for seeding wheat as soon as it dries sufficiently. Volunteer has in many cases made such a vigorous growth that drastic cultivation will be necessary to eradicate it. Wheat seeded two weeks ago in roadways and around windbreaks is making a strong healthy growth, as is that planted by many farmers for pasture.

Despite the abundant moisture, development of the sorghums during the past week has been slow, due to low temperatures.

The caryopteris, or bluebeard, is just coming fully into bloom. One selection at the station with a larger cluster of darker blue flowers is outstanding. The parosela are low mounds of pink, white-throated bloom. The perovskia is a misty blue maze. The China fleecevine is better than ever before, appearing like a fleecy cloud. It is remarkable how the ornamental values of plants have come out since the rains started.

Station work for the week consisted of treating seed wheat for smut, seeding wheat, taking soil samples, planting grass, and cultivating nursery.

Visitors of the week have included Dr. and Mrs. Clements, D. A. Savage, Dr. Whitfield of Dalhart,S.C.S., and Mr. McLain of S.C.S. nurseries at Stillwater.

Maximum temperature, 91°; minimum, 55°; precipitation, 0.88 inch.

PENDLETON: (Report for the three weeks ending September 19, 1936.)

Dry weather still prevails in this area. Farmers are anxious for good rains, so they may start their fall seeding operations. Prospects are now that no seeding will be done until after the first of October. Several showers totaling 0.88 inch fell during the month, wetting the soil to a depth of about 4 inches. Most of the moisture was soon lost, the surface soil is too dry for seeding or plowing. Work on the station has consisted chiefly of husking corn, weeding fallow, treating seed wheat, and excavating a basement for the new station cottage.

Visitors: F.D.Richey,Chief, and E.C.Auchter,Asst.Chief,Bureau of Plant Industry;&W.M.Chapline, Thornton T. Munger, G.D.Pickford, and John F. Irwin, U. S. Forest Service.

Maximum temperature, 89°; minimum, 29°; precipitation, 0.88 inch.

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# WEEKLY STATION REPORTS

## OF THE DIVISION OF

## DRY LAND AGRICULTURE

## BUREAU OF PLANT INDUSTRY

## U. S. DEPARTMENT OF AGRICULTURE

SEP 26 1939

Not for publication without
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REPORT FOR THE WEEK ENDING SEPTEMBER 26, 1936.

JUDITH BASIN:

The first few days of the week were dry and warm with considerable wind. Soil blowing was in evidence in several parts of the Basin. Late fall cultivation of fallow has put many fields in good condition for wind erosion, and we may look forward to drifting in these fields this winter. Friday was cold and stormy with snow falling on the Little Belt Mountains and a small amount of rain and snow being recorded at the Station.

The potatoes on the rotations were harvested this week. The foliage on some of the plants was destroyed by grasshoppers in July and these produced only very small potatoes, but those that escaped made exceptional growth after the August rains and returned a fair crop. Other field work included seeding a 10-acre field to rye and crested wheatgrass, seeding the winter wheat plots on the potato rotations, and seeding crested wheatgrass in experimental plots.

Visitors for the week included Ralph Mercer, Extension Agronomist, and M. P. Hansmeier, Assistant Secretary, Montana Seed Growers' Association, Montana State College, Bozeman, Mont.

Maximum temperature, 89°; minimum, 29°; precipitation, 0.21 inch.

HUNTLEY:

Fair weather prevailed during the week with the exception of the last two days when a drizzling rain and lower temperatures occurred. The moisture received will doubtless encourage the sowing of more winter wheat, as many farmers were waiting for rain before planting. A large acreage was previously planted in dry seedbeds. The precipitation of a week ago started growth in native grasses and in crested wheatgrass but did not reach to the depth of seeding fall grains. The rain of the last two days penetrated to the depth of seeding in some plots, but it is doubtful if there is enough moisture in the soil to give uniform germination on many of the plots.

Alfalfa seed continues to fill, and the first pods formed are ripening. It will require very favorable weather for the next 10 days to ripen the crop before probable frost injury.

Maximum temperature, 92°; minimum, 35°; precipitation, 0.61 inch.

SHERIDAN:

The first precipitation of any consequence since the first of June was received yesterday. Any benefit from this rain will be dependent upon more rain following, as the soil was wet only to a depth of from 2 to 3 inches. The first five days of the week were alternately quite cool and hot and almost completely cloudless. Fall seeding of wheat and rye was done during the week. Other work consisted mainly in cleaning up the building grounds and getting some of the machinery under shelter.

Maximum temperature, 92°; minimum, 35°; precipitation, 0.77 inch.

DICKINSON:

Warm weather the middle of the week was preceded and followed by cooler days and frost. Light rainfall was not enough to be of help toward fall plowing. Gravelling of the road leading into the station is being completed this week by W. P. A. Lignite is being hauled.

Trees about the grounds have developed considerable color since frost. Leaves have held on better than in some other years of less severe drought. Some trees are bare, however, some killing is evident, and a good many will be dead in the spring.

Maximum temperature, 90°; minimum, 29°; precipitation, 0.13 inch.

MANDAN:

Agronomy - Fallow plots and corn ground were duckfooted during the week. This was the first cultivation of fallow since its initial treatment. While it is not the regular practice to duckfoot corn ground, the recent heavy rain slicked the surface so that considerable soil drifting was taking place. Grass rows were also cultivated to reduce the tendency to blow.

Moderately high temperatures prevailed during the early part of the week. Low temperature but no frost characterized the weather of the latter part of the week. High wind during one 24-hour period caused considerable soil blowing in the Mandan district.

Maximum temperature, 94°; minimum, 33°; precipitation, 0.08 inch.

Arboriculture - The cutting of dead wood from the various tree blocks, pulling stumps, and hauling brush has been in progress all the week. The taking of height and diameter measurements has commenced and is in progress at the present time.

Horticulture - All fruit has been picked. Clearing out dead wood in fruit trees and cultivating orchard to prevent wind blowing are in progress.

BELLE FOURCHE:

The first few days were clear and abnormally warm, but cold, cloudy, unsettled weather prevailed the latter part of the week. A light rain was received September 25, and the first frost of the season occurred when the sky cleared the night of September 25. The temperature remained below freezing over 7 hours, and a minimum of 29° was recorded. Potato vines and all tender garden crops were killed by the frost.

Visitors were A.L.Ford, South Dakota Extension Service; F.L.Kirby, U. S. Forest Service; and J. M. Stephens, and J. T. Sarvis.

Maximum temperature, 93°; minimum, 29°; precipitation, 0.34 inch.

BELLE FOURCHE: (Report for the two weeks ending September 19, 1936.)

Unseasonably warm weather prevailed most of the time, but there were a few cool days when the temperature approached close to the freezing point. Killing frosts occurred in nearby localities on September 17, but the lowest temperature recorded at the station was 34°. Precipitation was practically nil, and the month to date is next to the driest of record for September.

Potato vines remain green and surprisingly vigorous, although no rain heavy enough to be of benefit to the crop has been received since the time of planting. The soil is still too dry and hard to permit plowing with the equipment available.

Maximum temperature, 95°; minimum, 34°; precipitation, 0.01 inch.

ARCHER:

The weather during the week ending September 26 was warm and dry until the afternoon of September 25 when a sudden north wind arose whipping up great clouds of dust. Low, threatening clouds covered the sky. A light mist was followed by snow. The temperature dropped from 84° to freezing within a few hours. At this writing a stiff north wind

is blowing and snow is falling. Precipitation amounted to 0.08 inch at 7 a.m., making a total of 0.13 inch to date for September. The seasonal precipitation to date is 10.3 inches. April received about normal precipitation, but May was rather dry. During the first 10 days of June 3.23 inches of rain fell. The weather was then dry until July 31 when a rain totaling 1.13 inches occurred. This was followed by 1.47 inches on August 2 and 3, and a shower totaling 0.37 inch on August 20 occurred. The long periods without effective precipitation and the high temperatures caused crops to burn severely.

The bean crop was the only one that approached normal production. In rotation 8-1926 the bean yield was 10.0 bushels per acre. This was on spring-plowed fallow. Rotation 18-1926 produced 9.2 bushels per acre. The smallest yield, 3.7 bushels per acre, was produced in rotations 7-8 and 9-1926. The yields of beans were larger than those of any of the small cereals.

Station work consisted of cutting and setting posts for a lamb pasture experiment, threshing beans, and spraying white weed.

Director W. L. Quayle and E. S. Mosher, Acting Superintendent of the CCC Camp, visited the station September 21. The Hillsdale vocational agriculture class visited the station September 22 to judge dairy cows and fat lambs.

Maximum temperature, 84°; minimum, 31°; precipitation, 0.08 inch.

NORTH PLATTE:

Strong winds the last three days of the week brought overcast skies. The temperatures during two nights dropped below 40°. So far there has been no freeze. Dry weather continued with no precipitation during the week. So far this month, 0.26 inch of rain has been recorded.

The winter wheat seeded on summer tilled land is emerging very spotted. Moisture is needed to insure a stand. The winter wheat variety plots were seeded on September 21. Twenty-one varieties are being included in this test. The sorghum varieties have been harvested, and most all varieties were well matured. A yield of 15 to 20 bushels of grain will be harvested from some of the varieties, whereas corn this year will yield practically nothing.

Maximum temperature, 91°; minimum, 34°; precipitation, none.

AKRON:

Hot, dry weather continued until Friday evening when a dark cloud approached from the northwest, bringing first swirling dust and then a heavy mist which is continuing this Saturday morning. This storm followed a rise from the most pronounced low barometric reading noticed for several weeks past. There was only 0.16 inch of precipitation this morning at 7:30, so the rainfall thus far received has not been impressive.

Rotation winter rye and wheat plots were seeded Tuesday and Wednesday. Rate and spacing corn project plots were seeded to winter wheat Friday. With the possible exception of the fallow plots, this seeding was all done on surface soil entirely too dry to support germination. One increase block of grain sorghum, H.C. 336, and the rotation kafir plots were harvested. A break-down of the corn harvester prevented better progress at harvesting the dead ripe, or dead, grain sorghums. The bean harvesting was completed.

A group of five farmers from the Sidney, Nebr. and the Peetz, Colorado, table lands visited the station Thursday. Other visitors

during the week were: E. W. Knobel and J. K. Ableiter of the Bureau of Chemistry and Soils; Lyman H. Andrews of the Great Western Sugar Company, Sterling; and Mr. Goodwin of the Experimental Staff of the Soil Conservation Service.

Maximum temperature, 94°; minimum, 35°; precipitation, 0.16 inch.

COLBY:

The weather has been rather changeable this week. On three days it was windy and dusty with considerable soil blowing on some fields. Today it is cold and rainy, with very little rain.

Where sufficient moisture fell on the 13th, wheat seeding is nearly finished. Where the rain was not sufficient to wet the seedbed, the seeding is proceeding slowly. A number of fields are up to good stands, mostly on ground seeded since the rain. Wheat seeded before the rain is generally a poor stand where it has not been reseeded. Nearly all the sorghum plots have practically dried up, except along the edges. Grasshoppers are still working.

Soil blowing threatens to become a serious menace. A number of fields have blown worse this fall than has ever been the case here in the fall with no more wind than we have had so far.

Maximum temperature, 88°; minimum, 39°; precipitation, trace.

GARDEN CITY:

The first rain since September 3, came Friday night but amounted to only 0.02 inch. The row crops harvest will be small this year, since only a few of the milo plots are ripening, and there is but one feterita and one Sumac plot. Some of the cowpeas were turned under for green manure and the remainder were mowed. They ranged from 11 to 14 inches in length.

H. H. Walkden of the U. S. Bureau of Entomology, Manhattan, Kans., was a visitor to the station.

Maximum temperature, 91°; minimum, 42°; precipitation, 0.02 inch.

TUCUMCARI:

The week has been cool, generally cloudy, and with a continual threat of rain, although only 0.35 inch was received. Cowpeas were cut a week ago and were cocked before showers began, but have made no progress toward curing. No sorghums have been cut, for it was hoped that late sucker heads might mature. This now seems very unlikely. Heavy rains have been received to the east and south, and it is reported that wheat fields are moist to a depth of several feet. Wheat seeding is well along, and the majority of fields show excellent stands with good prospects for winter grazing.

Maximum temperature, 90°; minimum, 50°; precipitation, 0.35 inch.

BIG SPRING:

One extreme of precipitation seems to follow another in this section of the country. Rains have been received every day except one during the past 10 days, producing a total of 9.51 inches for the period, during the past week 6.98 inches. By way of comparison, the rainfall during this 10-day period has totalled 0.89 inch more than had been received during the entire year up to September 1.

Feed crops are being damaged considerably by this prolonged cloudy, rainy weather. Milo and other compact-headed sorghums are sprouting on the stalk, and feed that is in the shock is moulding badly. Cotton is also reported to be sprouting in the boll.

Maximum temperature, 88°; minimum, 58°; precipitation, 6.98 inches.

LAWTON:

Heavy to excessive rains the past week practically kept farm work at a standstill. Swollen streams overflowed with considerable damage in some places. The 6.15 inches of precipitation received the past week makes a total of 9.82 inches from September 15 to 27, inclusive. A torrential rain of 3.34 inches on the 22nd did considerable damage in the vicinity of Lawton, when 2.66 inches of this rain fell within one hour, 12:00 noon to 1:00 p.m. A sharp drop in temperatures accompanied the rains the latter part of the week, and a minimum of 50° was recorded on the 26th. Moderately warm temperatures during most of the week resulted in a rapid emergence of volunteer grains, and early seedings of wheat and oats and renewed growth of native grasses.

WOODWARD:

Rain has occurred on 11 of the 15 days since September 11. The total for the month so far has been 3.27 inches. All of it has come either in protracted drizzles or in light showers, and there has been practically no run-off. Wheat planted two to three weeks ago is making a fast growth. Much wheat was planted at that time for pasture, since there was hope of little sorghum feed. Since then the sorghums have made a heavy growth of leaves, though more deliberate than would have been the case had temperatures been higher. With sorghums and wheat pasture making so favorable a growth there will in general be no shortage of feed.

Wheat planting in general has been delayed by the long rainy spell and farmers are dodging showers and planting whenever possible.

In the rose garden on the station it seems that each variety is tying to outdo another in number and quality of blossoms. The China fleecevine becomes fleecier and showier day by day. It has never before bloomed so freely. Heckrott honeysuckle is making a final burst of bloom with flowers larger and more colorful than at any previous time. Everyone visiting this section of the State remarks on the washed fresh appearance of the whole landscape. Many trees partially defoliated during the summer are putting out new leaves.

Drilling wheat, repairing roads, and planting ornamentals comprised most of station work during the week.

Maximum temperature, 87°; minimum, 51°; precipitation, 0.93 inch.

PENDLETON:

Field work in the Columbia Basin wheat area is at a standstill, as the soil is too dry for seeding. The showers of rain received early in September have not started weed growth, although a considerable amount of volunteer wheat has started growth. Bright warm days and cold nights prevailed all week. Frost has occurred in exposed places.

Maximum temperature, 83°; minimum, 35°; precipitation, None.

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